UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/975,145	10/09/2001	Laurent P. Daynes	SUN-P6120-RSH	8892

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EXAMINER
TANG, KENNETH

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 06/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>24 January 2002</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>09 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-48 are presented for examination.

Specification

2.   Applicant is required to update paragraph [0002] of the specification to include the

current serial number, filing date, etc. of the co-pending application.

3.   On page 3, line 12, "benefits" should be changed to "benefit" to correct a grammatical

error.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   Claims 1-48 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for

omitting essential structural cooperative relationships of elements, such omission amounting to a

gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural

cooperative relationships are: how the null and non-null pointer values have anything to do with

the class initialization barrier guaranteeing that a class is initialized before the class is first used

by a program (in claims 1, 17, and 33). There is no relationship made between the class

initialization barriers described in the preamble to the limitations described in the body of claim

1, for example.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   **Claims 1-3, 17-19, and 33-35 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Gee et al. (hereinafter Gee) (US 6,374,286 B1) in view of Sandage et al.

(hereinafter Sandage) (US 5,414,848).

6.   As to claim 1, Gee teaches a method to efficiently realize class initialization barriers in a

virtual machine (JVM), wherein class loading always takes place before class initialization, and

wherein a class initialization barrier guarantees that a class is initialized before the class is first

used by a program *(col. 6, lines 13-20)*, comprising:

associating a shared runtime representation (logical) of the class with a task class mirror

table (virtual method table 302) that comprises at least one entry per-task, including an initialized

entry, for a plurality of tasks, wherein each entry holds either a null pointer value or a non-null

pointer to a task class mirror object *(col. 13, lines 4-19)*, wherein all entries of a task mirror table

that hold a non-null pointer value and that are associated with a same task hold a pointer to a

same task class mirror object, wherein the task class minor object holds a task private

representation of the class for that task (CSA for Java/lang/Class) *(col. 13, lines 4-34, col. 12,*

lines 13-25);

using the initialized entry of a task in the task class minor table to determine whether this

task has initialized the class associated with the task class mirror table *(col. 6, lines 13-20)*; and

accessing the task class minor object associated to a particular task *(col. 13, lines 4-34, col. 12,*

lines 13-25).

7.   Gee fails to explicitly teach having a multitasking within a virtual machine. However,

Sandage teaches multi-tasking within a virtual machine *(col. 1, lines 10-37)*. It would have been

obvious to one of ordinary skill in the art at the time the invention was made to include the

feature of a multitasking virtual machine because this would enhance the system by allowing for

code sharing of routines among virtual machines running in the operating system *(col. 2, lines 2,*

lines 28-59).

8.   As to claim 2, Gee teaches wherein each task is associated with a unique integer value

(col. 12, lines 42-67 through col. 13, lines 1-19); wherein the unique integer value is used to

compute a byte-offset from a beginning of task class mirror tables that can be used to retrieve

from the initialized entry of any task class mirror table the pointer to the task class mirror object

(col. 12, lines 13-25); and wherein a computed byte-offset to the initialized entry is stored in a

descriptor of a plurality of threads executing on behalf of a corresponding task *(indexed CSA*

area 306).

9.   As to claim 3, Gee teaches creating the task class mirror table and associating the task

class mirror table (virtual method table 302) with the shared runtime representation of the class

upon creation of the shared runtime representation of the class *(col. 12, lines 13-33, col. 13, lines*

20-34); and setting all entries of the task class mirror table to the null pointer value *(col. 19, lines 31-39)*.

10.   As to claims 17-19, they are rejected for the same reasons as stated in the rejections of claims 1-3.

11.   As to claims 33-35, they are rejected for the same reasons as stated in the rejections of claims 1-3.

Allowable Subject Matter

12.   Claims 4-16, 20-32, and 36-47 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
6/12/05

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